

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Dennis POSTUPACK

Appl. No. 10/813,435

Filed: 31 March 2004

For: **METHOD AND APPARATUS FOR  
STRENGTHENING GLASS**

*Confirmation No. 3804*

Art Unit: 1731

Examiner: Jason L. Lazorcik

Atty. Docket: 01638.0010.NUS02

**REPLY BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Applicant submits this Reply Brief in response to the Examiner's Answer mailed on 28 September 2009.

No Extensions of Time are thought to be necessary. Nevertheless, if any such extensions are needed to ensure preservation of the Appeal or prevention of abandonment, they are hereby petitioned under 37 C.F.R. §1.136. All fees required therefore are hereby authorized to be charged to our Deposit Account No **08-3038** referencing docket number **01638.0010.NPUS02**. Any other fees that are deemed necessary for the processing of the Appeal or to otherwise prevent abandonment of this application, such fees are also hereby approved and should be charged to the above-noted deposit account number.

In accordance with 37 CFR 41.41 and MPEP §1208, Appellants hereby submit this Reply Brief within two months of the date of the Examiner's Answer. This reply does not include any new or non-admitted amendment, or any new or non-admitted affidavit or other evidence. This reply reinforces the arguments made in the Brief on Appeal filed on 14 August 2009 ("Brief of 8/14/09") in response to comments made in the Examiner's Answer. The arguments herein are intended to be considered in conjunction with the content of the Brief of 8/14/09.

The Examiner's Answer continues to advance prior statements that the present claims are obvious over the prior art because the prior art teaches dipping times of less than 5 minutes and 15 seconds in a single embodiment. In fact, the common thread in the arguments of the Examiner's Answer is that, because both 10 seconds and 15 seconds are substantially less than 5 minutes, then one range is obvious over the other. The Examiner then assumes that the burden of proof is properly shifted to the appellants and requires evidence of unexpected results.

Simply because two ranges are less – *arguendo*, even substantially less – than a third range does not render the two ranges obvious over each other. For example, both a laptop computer and a palmtop computer are substantially smaller than their predecessor mainframe computers but clearly not obvious over one another. Much innovation and technological progress was required over the years before manufacturers were able to repackage the laptop in the palmtop size. Analogously, the Answer's conclusion of obviousness based on both ranges being less than 5 minutes is incorrect. Additionally, other than merely stating that it is so, no reason or authority for such a position is provided. And additionally still, such a position violates the essence of obviousness that there are no pre se laws of obviousness.

Further, the Answer repeatedly dismisses as without proof, the Appellants' points regarding the lack of teachings in the prior art. In fact, it is the rejection that is required to provide such proof of disclosure. The lack of teaching in the prior art is not only self-evident, but also does not require further proof.

In the argument section entitled Argument #1, the Answer alleges that the claimed range is encompassed within the range of substantially less than 5 minutes as taught by GB164. The ranges taught by GB164 do not encompass the claimed range. The GB164 reference identifies the times for GB164 process to be 5 to 25 minutes:

In accordance with the present invention there is provided a method of treating a soda-lime glass article with a potassium salt, wherein the glass is contacted with the potassium salt at an interfacial temperature of at least 875° F. and the glass is thereafter cooked before strengthening which results from said treatment is dissipated. *The time of treatment in this manner need only be 5 to 40 minutes, and is usually 5 to 25 minutes. [Emphasis added]*

[GB164 at p.1, col. 1: 37 - col. 2: 1]

The reference then states that to reduce the time to less than five minutes requires certain considerations:

Contacting the glass with the potassium treating salt for times substantially less than 5 minutes can be satisfactorily conducted provided that sufficiently high temperatures are employed to secure the necessary potassium exchange in the surface regions of the glass article being treated, and provided that the potassium exchange (potassium diffusion) is conducted into a sufficient depth of the outer glass surface to insure a resulting potassium to sodium ratio after treatment such that the exchange induced surface ratio concentration of potassium to sodium is in excess of 1 to 1 for a surface depth of at least about 1 micron and preferably even deeper.

[GB164 at p. 3, col. 2: 91-106]

The reference then sets forth some other constraints and considerations regarding the time reduction and then presents many examples having dipping times of 10 minutes or more, and a single example having a dipping time of 15-60 seconds [Example IV]. Therefore, appellants disagree that the range of 10 seconds or less are taught by a reference that identifies its preferred time to be 5 to 25 minutes and presents a single example of 15-60. Therefore, GB164 does *not* teach the claimed range of 10 seconds or less. Further,

GB164 appears to imply that these 15-60-second samples are not as strong and desirable as the remainder of the samples since it has not provided any load strength analysis for the samples of Example IV and merely states that they are better than untreated samples.

In addition to not teaching the claimed range, there is no suggestion that any dipping time lower than 15 seconds is contemplated at all. The Answer relies on a single supposition that GB164 teaches a range of less than 5 minutes to conclude that less than 10 seconds is also taught. This conclusion is unsupported because the reference in actuality does not identify the range of 10 seconds or less, and also for all of the reasons stated supra and outlined in the Brief of 8/14/09. The Answer, in section II of the response to Argument #1, alleges that 10 seconds is obvious over 15 seconds predicated on the single shaky foundation that conventional dipping times are much larger. As noted above, this reasoning is faulty. And not only are conventional times much larger, but the times taught by GB164 are much larger too! In fact, the typical time taught by GB164 is 5 to 40 minutes which is 300 to 2400 seconds, and the shortest time mentioned is 15 seconds, which is 50% larger than the upper limit of the claimed range.

The Answer states that the appellants have not provided evidence of unexpected results and construes obviousness from the same. This is an improper shift of burden. Notwithstanding that many financial and corporate reasons, completely unrelated to obviousness, may exist for not providing such evidence, the burden is not on the inventor to prove the invention unobvious by providing data.

In the section Argument #2, the Answer adopts that GB164 places no limitation and restrictions on the dipping time. This statement is without regard for the content of GB164. Brief readings of the passages quoted in this Reply easily reveal that GB164 places many restrictions on the range. First and foremost, the range of GB164 is 5 to 40 minutes. Additionally, the preferred range is 5 to 25 minutes. Further still, for the time period of 15-60 seconds, all of the caveats and cautions outlined on pages 3-4 of the reference are restrictions: *“provided that sufficiently high temperatures are employed . . . and provided that the potassium exchange (potassium diffusion) is conducted into a*

*sufficient depth . . . it is necessary to conduct the conduct the potassium exchange so that there is a depth penetration . . . so that subsequent abrasive treatment . . . or fabricating operations to which the treated glass sheet may be later subjected, will not cause substantial loss of strength . . . Another factor to be considered . . .” [GB164 at p. 3, col. 2: 91 – p. 4]*

In the section Argument #3, the Answer notes that attention to viscosity does not constitute teaching away from the range. In fact, when this consideration is determinative of the restrictions placed on the process, such as those quoted supra, and when the reference does not set forth a configuration that teaches a working range that enables the dipping time of 10 seconds or less, then the references indeed teaches away from it. Additional ways that GB164 lead one of ordinary skill away from a range of 10 seconds or less are out lined in the Brief of 8/14/09.

In the section Argument #4, the Answer states that the teaching of 15-60 is an additional teaching and does not imply that times of less than 15 seconds are not enabled. Appellants agree that it is an additional teaching, but it is in addition to times of 5 to 40 minutes – not 10 seconds or less. In fact, when 15-60 seconds is the only example with a time of less than 10 minutes, and when the typical time for the process is identified as 5 to 25 minutes, and where the process is described with parameters for processing within those longer time periods, and for all of the reasons already outlined numerous times supra and in the Brief of 8/14/09, GB164 is lacking a teaching or suggestion of the claimed range and is lacking disclosure of a process that is suited to enable the shortened time of 10 seconds or less.

The section Argument #5 outlines the same arguments with respect to the 5 minute time as addressed earlier which will not be repeated again. The Answer then quotes the office policy on Attorney argument. Appellants point out that there has been no reliance on “attorney argument” in lieu of factual evidence. The arguments presented to the Office point to specific facts and statements in the GB164 reference, and the Answer summarily dismisses this.

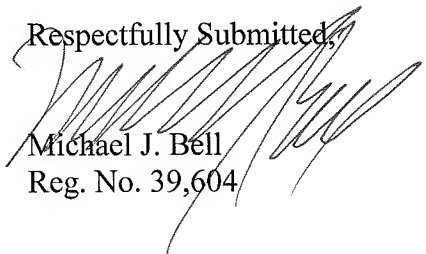
In the same vein, the section Argument #6, states that there is no evidence that GB164 is not enabled for dipping times of 10 seconds or less. This statement circumvents the proper burden of proof: there must be evidence that GB164 *is enabled for* the teaching of 10 seconds or less, given that it does not disclose such a range, and given all of the reasons named supra that it does not contemplate a range below 15-60 seconds, and given that the salt bath viscosity will not meet its own restrictions of securing necessary potassium exchange, etc. [*discussed supra and at GB164 p. 3, col. 2:91 – p.4*]. So, to establish a *prima facie* case of obviousness, GB164 needs to meet the burden of disclosure and not the other way around.

For at least these reasons outlined here, taken in conjunction with the arguments set forth in the Brief of 8/14/09, it is respectfully requested that the rejection of the claims be overturned and the claims passed to issue.

As demonstrated above, the Examiner's Answer fails to rebut the arguments set forth in the Brief of 8/14/09, and the Brief of 8/14/09 establishes that the Final Office Action fails to set forth a prima facie case of obviousness under 35 U.S.C. §103(a). Therefore, Appellant requests that the Board reconsider the outstanding rejections and reverse them so that the claims can be passed to issue.

This Appeal Brief is being submitted in accordance with 37 CFR §41.41 within the specified period for response and two months from the date of the filing of the Examiner's Answer. If any additional fees are deemed necessary for the advancement of the Appeal and to avoid abandonment of the application, they are hereby authorized to be charged to our Deposit Account number **08-3038** as noted on the first page of this submission.

Respectfully Submitted,



Michael J. Bell  
Reg. No. 39,604

Date: 30 November 2009

HOWREY LLP  
2941 Fairview Park Drive, Box 7  
Falls Church, VA 22042  
(703) 663-3600